

## REMARKS

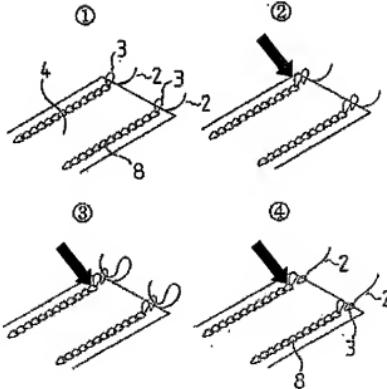
In this response to the Final Office Action dated June 24, 2010, Claims 1 and 10 have been amended. Support for these amendments can be found, for example, from Figure 14 and the related description in the application as originally filed. No new matter is added by these amendments.

Claims 1-6 and 10-14 remain pending. The following addresses the substance of the Office Action.

### **Claim rejection under 35 U.S.C. 103 (a) over Igaki and Swanson**

The Examiner rejected claims 1, 3, 4, 6 and 10-14 under 35 U.S.C. 103(a) as allegedly unpatentable over U.S. Patent No. 5,766,188 to Igaki ("Igaki") in view of U.S. Patent No. 2,811,299 to Swanson *et al.* ("Swanson"). Applicants respectfully traverse this rejection.

The suture reinforcement material according to Claims 1 and 10 has a feature of preventing a thread from unraveling by removing a loop next to the sewing end from another loop anterior to the loop, and passing the extended thread end through the loop next to the sewing end continuous to the thread end, as shown in Fig. 14, 2-4 of the originally filed application.



A more detailed view of the above illustrated method is presented with reference to the following Image 1.

Image 1

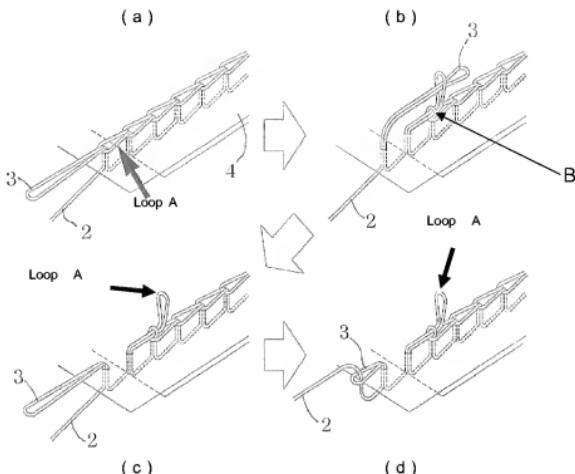


Image 1 was submitted in the Applicants' previous response filed on March 22, 2010 and is presented again for instant illustration. In Image 1, the same reference numerals as those of the equivalent components in the above Fig. 14 are used. In Image 1, the numeral 2 denotes a thread end, 3 denotes the loop next to the sewing end, and 4 denotes a tubular suture reinforcement material (the same as those of Fig. 14).

One aspect of the presently claimed invention is that the part of the suture reinforcement material to be removed with certainty from the human body can be reliably separated from the part of the material to be left in the human body, and can be easily removed. Preventing a thread from unraveling in this manner can achieve the following effects: the thread is prevented from being unintentionally drawn out from the suture reinforcement material; the suture reinforcement material is not separated before the predetermined suturing process is complete; and, after the predetermined suturing process is complete, the thread can be smoothly drawn out from the loop next to the sewing end by returning the thread end passed through the loop to the original position, and pulling the thread.

In contrast, the mechanism of Swanson for preventing a thread from unraveling shown in Fig.4, in which the loop next to the sewing end is not removed from a further anterior loop, is distinctly different from that of the presently claimed invention.

In the mechanism of Swanson for preventing a thread from unraveling shown in Fig.4, a thread end 32 is pulled to draw a loop 31 toward a material 13, and the thread 32 is thereby significantly tightly fixed. Accordingly, the effect of preventing a thread from unraveling can actually be achieved; however, after the subsequent predetermined suturing process is complete, it is extremely difficult to smoothly draw the thread out from the loop next to the sewing end by returning the thread end passed through the loop to the original position, and pulling the thread.

Conversely, in the mechanism of the present invention for preventing a thread from unraveling, the thread end 2 is, when pulled, fixed only by the loop 3, and thus the force of fixing the thread is weaker than that of Swanson.

Accordingly, the mechanism of Swanson for preventing a thread from unraveling is obviously different from the presently claimed invention. In addition, Swanson nowhere teaches that the thread is smoothly removed after the predetermined suturing process is complete. Consequently, the mechanism of the presently claimed invention for preventing a thread from unraveling would not have been obvious to a person skilled in the art in view of Swanson.

In view of the foregoing, Applicants submit that Claims 1 and 10 are unobvious over the combined teachings of Swanson and Igaki, which does not teach the mechanism of the presently claimed invention for preventing a thread from unraveling. Accordingly, withdrawal of rejection and reconsideration of Claims 1 and 10 and their dependent Claims 3, 4, 6 and 11-14 is respectfully requested.

#### **Claim rejection under 35 U.S.C. 103 (a) over Igaki, Swanson, and Oi**

Claim 2 was rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Igaki in view of Swanson in further view of U.S. Patent No. 6,063,097 to Oi et al. ("Oi").

The Examiner asserted that Oi discloses that the tip part is sewn in a tapering fashion (Figure 7 of Oi). Based on this, the Examiner rejected the present invention as being obvious over the above-mentioned cited references in further view of Oi. However, as explained above, neither Igaki nor Swanson provides the mechanism of the present invention for preventing a thread from unraveling. Further, Oi also fails to disclose such a mechanism of the present invention for preventing a thread from unraveling. As such, the subject matter recited in Claim 2

is unobvious over the combined teachings of the above cited references. Withdrawal of the rejection and reconsideration of Claim 2 is respectfully requested.

**Claim rejection under 35 U.S.C. 103 (a) over Igaki, Swanson, and Dalessandro**

Claim 5 was rejected under 35 U.S.C 103(a) as allegedly unpatentable over Igaki in view of Swanson and in further view of U.S. Patent No. 6,273,897 to Dalessandro et al. (“Dalessandro”).

The Examiner asserted that Dalessandro teaches projections on a buttress (Fig. 12 of Dalessandro). Based on this, the Examiner rejected the present invention as being obvious over the above-mentioned cited references in further view of Dalessandro. However, the projections disclosed in Dalessandro are provided so as to be inserted in a knife guide channel of a staple. Therefore, the shape and the functions of the projections of Dalessandro are totally different from those of the projection of the present invention, which is formed on a sewing end portion of a sheet-like material. In addition, as explained above, neither Igaki nor Swanson provides the mechanism of the present invention for preventing a thread from unraveling. Dalessandro also fails to disclose such a mechanism for preventing a thread from unraveling. Accordingly, Claim 5 is unobvious over the combined teachings of the above cited references. Withdrawal of the rejection and reconsideration of Claim 5 is respectfully requested.

**No Disclaimers or Disavowals**

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicants are not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicants reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicants have made any disclaimers or disavowals of any subject matter supported by the present application.

### CONCLUSION

Applicants have endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, arguments in support of the patentability of the pending claim set are presented above. In light of the above remarks, reconsideration and withdrawal of the outstanding rejections is respectfully requested. If the Examiner has any questions which may be answered by telephone, he or she is invited to call the undersigned directly.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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